

Subject: Science (Rolling 2 Year Cycle Route A)

| | Autumn | | Spring | | Summer | |
|------------------|--|---|--|----------------------|---|---|
| | 1 st Half | 2 nd Half | 1 st Half | 2 nd Half | 1 st Half | 2 nd Half |
| KS1 | Physics <u>Everyday Materials :</u> What are my toys made from and why? What is the best material to use when building a castle? | | Biology <u>Living Things and their Habitats :</u> Why do animals live in different places? | | Biology <u>Plants :</u> Which tree has the biggest leaves? | Biology <u>Animals, including Humans:</u> How could we organise animals that live under the sea? |
| | Physics <u>Seasonal Change - Autumn and Winter :</u> In which season does it rain the most? | | Physics <u>Seasonal Change - Spring :</u> Does the wind always blow the same way? | | Physics <u>Seasonal Change – Summer 1:</u> Why do people go to the beach in Summer? | |
| Lower KS2 | Chemistry <u>States of Matter:</u> How does the mass of a block of ice affect the length of time it takes to melt? | Chemistry <u>Rocks:</u> What would be the best rock to use to build a pyramid? | Biology <u>Living Things and their Habitats :</u> How does the variety of invertebrates on the school field change over the year? | | Biology <u>Plants :</u> How does the length of the carnation stem affect how long it takes for the food colouring to dye the petals? | Biology <u>Animals Including Humans:</u> Why do different types of vitamins keep us healthy and which foods can we find them in? |
| | Chemistry <u>Properties and changes of materials:</u> How can we change materials reversibly and irreversibly? | | Biology <u>Living Things and their Habitats :</u> Why does variation exist? | | Biology <u>Evolution and Inheritance:</u> Is there a pattern between the size and shape of a bird's beak and the food it will eat? | Biology <u>Animals, including Humans:</u> Is there a relationship between a mammal's size and its gestation period? |

Subject: Science (Rolling 2 Year Cycle Route B)

| | Autumn | | Spring | | Summer | |
|------------------|---|---|--|---|---|--|
| | 1 st Half | 2 nd Half | 1 st Half | 2 nd Half | 1 st Half | 2 nd Half |
| KS1 | Physics <u>Everyday Materials and their Uses:</u> Why have materials been used to make certain things in my classroom? How is this different from the past? Which material would make the best parachute for an astronaut returning to Earth? | | Biology <u>Living Things and their Habitats:</u> How does the habitat of the Arctic compare with the habitat of the rainforest? | | Biology <u>Plants:</u> How does a cactus survive in the desert without water? | Biology <u>Animals, including Humans:</u> Do amphibians have more in common with reptiles or fish? |
| | Physics <u>Seasonal Change - Autumn and Winter:</u> Does it rain in space? | | Physics <u>Seasonal Change – Spring:</u> Where is the hottest country in the world? Why? | | Physics <u>Seasonal Change – Summer:</u> Which leaf is the best for providing shade from the sunshine? | |
| Lower KS2 | Physics <u>Sound:</u> What is the best material for muffling sound? | Physics <u>Light:</u> Which coins are most reflective? | Physics <u>Forces and Magnets:</u> How does the mass of an object affect how much force is needed to make it move? | | Physics <u>Electricity:</u> How has electricity affected the way we live? | Biology <u>Animals Including Humans:</u> How can we group our teeth? |
| | Physics <u>Earth and Space:</u> How does temperature/size/day length/year length change as you get closer/further to the sun? | Physics <u>Light:</u> Why does my shadow change length over the course of a day? | Physics <u>Forces:</u> Can you create a pulley system to lift a given load? | Biology <u>Living things and their habitats:</u> Why do animals and plants compete – and what for? | Physics <u>Electricity:</u> Which type of fruit makes the best fruity battery? | Biology <u>Animals, including Humans:</u> How might the circulatory system of an elephant, a hummingbird, or a polar bear differ? |

Subject: Understanding the World

| Understanding the World | |
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| Educational Programme | Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children’s personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children’s vocabulary will support later reading comprehension. |

| | Autumn | Spring | Summer |
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| Reception | <ul style="list-style-type: none"> • Explore the natural world around them beginning to understand the local environment and the changes in the seasons • Describe what they see, hear and feel whilst outside • Begin to recognise some environments that are different from the one in which they live. • Understand the effect of changing seasons on the natural world around them (Autumn to Winter) – can the children compare this with other countries? • Begin to understand different materials familiar objects are made from. • Begin to suggest which materials might be best for an object. | <ul style="list-style-type: none"> • Explore the natural world around them • Describe what they see, hear and feel whilst outside • Recognise some environments that are different from the one in which they live. • Understand the effect of changing seasons (Winter to Spring) on the natural world around them. • Recognise different habitats in the local area. • Begin to suggest which habitat an animal is best suited to | <ul style="list-style-type: none"> • To explore the natural world around them. • Describe what they see, hear and feel whilst outside • Recognise some environments that are different from the one in which they live. • Understand the effect of changing seasons on the natural world around them. (Spring to Summer) • Understand the importance of sun safety. • To understand what a plant needs to grow. • To group animals in their own way and discuss. |
| Nursery | <ul style="list-style-type: none"> • Notice differences between people. • Explore natural materials, indoors and outside • Explore how things work. • Plant seeds and care for growing plants. • Use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Talk about what they see beginning to use a wide vocabulary. | <ul style="list-style-type: none"> • Begin to understand the key features of the life cycle of a plant and an animal • Begin to understand the need to respect and care for the natural environment and all living things • Begin to talk about the differences between materials and changes they notice. | <ul style="list-style-type: none"> • Begin to understand what plants need to grow. • To begin to know ways we can look after our surroundings – putting litter in the bin. • Begin to talk about how materials are different – begin to link to properties. |